WHAT IS CLAIMED IS:

1. A stormwater treatment apparatus, comprising:

a receptacle adapted to receive water flowing from a surface drainage area, comprising:

the receptacle having a bottom wall and a top wall;

an inlet, the inlet supplying water to the receptacle;

an outlet, the outlet passing water out of the receptacle;

the inlet and the outlet being in fluid communication with one another;

a permanent pool, the permanent pool defined by at least the bottom wall of the receptacle, and extending upward from said bottom wall to the height of said outlet, the permanent pool forming a region of reduced flow velocity to trap sediments therein; and,

an inactive pool, the inactive pool defined by at least the permanent pool, a first baffle extending from the bottom wall, a second baffle extending from the bottom wall, and the bottom wall of the receptacle.

2. The apparatus of claim 1, wherein the receptacle additionally comprises an active pool, the active pool defined by at least the top wall of the receptacle, and extending downward from said top wall to at least the height of said outlet.

3. The apparatus of claim 1, wherein the outlet includes an orifice substantially smaller than the inlet.

4. The apparatus of claim 1, wherein the apparatus includes an overflow structure, the overflow structure diverting excess stormwater from the receptacle.

5. The apparatus of claim 4, wherein the overflow structure includes a control weir and an apparatus inlet, and the overflow structure is integral with the receptacle.

6. The apparatus of claim 5, wherein the integral overflow structure includes a stormwater collection inflow pipe and a stormwater collection outflow pipe.

7. The apparatus of claim 5, wherein the integral overflow structure includes an apparatus outlet pipe, the apparatus outlet pipe returning water treated in the receptacle to the overflow structure.

8. The apparatus of claim 5, further comprising a control weir, the control weir regulating the diversion of water to the bypass pipe.

9. A stormwater treatment apparatus, comprising:

a receptacle adapted to receive water flowing from a surface drainage area, the receptacle having at least a top and a bottom;

an inlet section, the inlet section supplying water to the receptacle;

an outlet section, the outlet section passing water out of the receptacle;

at least one mid section, the at least one mid section comprising a fluid communication between the inlet section and the outlet section;

a permanent pool, the permanent pool defined by at least the bottom wall of the receptacle, and extending upward from said bottom wall to at least the height of said outlet; the permanent pool generally below the path of fluid communication; the permanent pool forming a region of reduced flow velocity to trap sediments therein.

10. The apparatus of claim 9, wherein the receptacle additionally comprises an inactive pool, the inactive pool defined by at least the permanent pool, a first baffle extending from the bottom of the receptacle, a second baffle extending from the bottom of the receptacle, and the bottom of the receptacle.

11. The apparatus of claim 9, wherein the receptacle additionally comprises an active pool, the active pool defined by at least the top wall of the receptacle, and extending downward from said top wall to the height of said outlet.

12. The apparatus of claim 9, wherein at least a first portion of the first baffle is at an angle of between about thirty degrees and about sixty degrees with the bottom of the receptacle.

13. The apparatus of claim 9, wherein at least a first portion of the second baffle is at an angle of between thirty degrees and sixty degrees with the bottom of the receptacle.

14. The apparatus of claim 9, wherein at least a first portion of the first baffle is at an angle of about forty-five degrees with the bottom of the receptacle.

15. The apparatus of claim 9, wherein at least a first portion of the second baffle is at an angle of about forty-five degrees with the bottom of the receptacle.

16. The apparatus of claim 12, wherein at least a second portion of the first baffle is at an angle of roughly ninety degrees with the bottom of the receptacle.

17. The apparatus of claim 13, wherein at least a second portion of the second baffle is at an angle of roughly ninety degrees with the bottom of the receptacle.

18. The apparatus of claim 9, wherein the apparatus has a volume of at least 500 cubic feet.

19. The apparatus of claim 9, additionally comprising:

a third baffle, the third baffle near said inlet, the third baffle extending down from the top wall of the receptacle; and,

a fourth baffle, the fourth baffle near said outlet, the fourth baffle extending down from the top wall of the receptacle.

20. A stormwater treatment apparatus, comprising:

a receptacle adapted to receive water flowing from a surface drainage area;

the receptacle having a bottom, a top, and a perimeter;

the receptacle having an inlet and an outlet;

the inlet and the outlet being in fluid communication with one another;

an active pool, the active pool defined by at least the top wall of the receptacle, the perimeter of the receptacle, and extending downward from said top wall to at least the height of said outlet, the active pool a region of fluid communication between the inlet and the outlet;

a permanent pool, the permanent pool a region of little or no flow gravitationally beneath the active pool to trap sediments therein.

21. The apparatus of claim 20, wherein the inactive pool is a region defined by at least a first baffle and a second baffle, the perimeter of the receptacle, and the permanent pool.

22. The apparatus of claim 20, wherein the outlet comprises an oriface substantially smaller than the inlet.

23. The apparatus of claim 20, wherein the outlet includes an overflow structure, said overflow structure diverting excess stormwater from said receptacle when said

receptacle is at or near full, the overflow structure not substantially effecting the performance of the active pool.

24. The apparatus of claim 23, wherein the overflow structure is integral to the receptacle, the integral overflow structure additionally comprising:

a control weir, a stormwater collection system inflow, an apparatus inflow, and an access way.

25. The apparatus of claim 23, wherein the integral overflow structure includes a stormwater collection inflow pipe and a stormwater collection outflow pipe.

26. The apparatus of claim 23, wherein the integral overflow structure includes an apparatus outlet pipe, the apparatus outlet pipe returning water treated in the receptacle to the overflow structure.

27. A stormwater treatment apparatus, comprising:

a receptacle adapted to receive water flowing from a surface drainage area;

the receptacle having a bottom, a top, and a perimeter;

the receptacle having an inlet and an outlet, the outlet including an oriface smaller than the inlet,

the receptacle having an inlet, the inlet including an integral overflow structure, said overflow structure diverting excess stormwater from said receptacle when said receptacle is at or near full;

the inlet and the outlet being in fluid communication with one another;

an active pool, the active pool is a region defined by the top of the receptacle, the sides of the receptacle, and at least the height of the outlet;

a permanent pool, the permanent pool a region of little or no flow beneath the active pool to trap at least small sediments therein; and,

an inactive pool, the inactive pool a region defined by the permanent pool, at least a first baffle attached to the bottom of the receptacle, a second baffle attached to the bottom of the receptacle, the sides of the receptacle, and the bottom of the receptacle.

28. The apparatus of claim 27, wherein at least a first portion of the second baffle is at an angle of between thirty degrees and sixty degrees with the bottom of the receptacle.

29. The apparatus of claim 27, wherein at least a first portion of the first baffle is at an angle of about forty-five degrees with the bottom of the receptacle.

30. The apparatus of claim 27, wherein at least a first portion of the second baffle is at an angle of about forty-five degrees with the bottom of the receptacle.

31. The apparatus of claim 29, wherein at least a second portion of the first baffle is at an angle of roughly ninety degrees with the bottom of the receptacle.

32. The apparatus of claim 30, wherein at least a second portion of the second baffle is at an angle of roughly ninety degrees with the bottom of the receptacle.

33. The apparatus of claim 27, wherein the apparatus has a volume of at least 500 cubic feet.

34. An apparatus for separation of pollutants in runoff that are less and more dense than the runoff water, comprising:

a receptacle adapted to receive stormwater runoff flowing from surface areas tributary to it, the receptacle having a bottom and a top, a left side-wall and a right side-wall, and a front side-wall and end side-wall, forming a rectangular tank;

an inlet for introducing stormwater flowing from tributary surface areas into the receptacle and an outlet for discharging water;

at least four baffles positioned within the receptacle between the inlet and the outlet, with all of the baffles attached to both sides of the receptacle, with at least two baffles attached to the bottom of the receptacle and not attached to the top, at least one baffle attached to the top of the receptacle and not attached to the bottom, and at least one baffle that is not attached to the bottom and top of the receptacle;

an inlet section for receiving water, for decreasing energy of the flowing water, and for uniformly distributing water across the width of the receptacle;

one or more midsections for trapping materials more dense than water that settle out of water by gravity and for trapping materials less dense than water that rise to the surface of water by gravitational separation;

an outlet section for discharging water at a controlled rate and for excluding materials more and less dense than water being discharged, the outlet section

including an opening located on the end side-wall that allows water in the apparatus to discharge, the outlet substantially smaller than the inlet;

a mesh screening, the mesh screening from the bottom to the top of the apparatus is attached in a removable fashion to the end side-wall to form a barrier through which any water that discharges through the opening must pass prior to discharge;

an overflow structure, the overflow structure diverting excess stormwater flow from the receptacle, the overflow structure integral with the receptacle;

an active pool, the active pool defined by at least the top wall of the receptacle, and extending downward from said top wall to at least the height of said outlet opening;

a permanent pool, the permanent pool defined by at least the bottom wall of the receptacle, and extending upward to at least the height of said outlet opening; and,

an inactive pool, the inactive pool defined by at least the permanent pool, the bottom of the receptacle, and the at least two baffles attached to the bottom of the receptacle.

35. A stormwater treatment apparatus, comprising:

a receptacle having a top, a bottom, a left side wall and a right side wall, an inlet side wall and an outlet end wall, said receptacle comprising an inlet section, an outlet section and at least one midsection between said inlet section and said outlet section;

an inlet located in said inlet section, spaced above said bottom;

an outlet located in said outlet section spaced above said bottom, said outlet height defining a permanent pool water surface elevation level;

a first baffle having an upstream side and a downstream side, said first baffle connected to said bottom and extending upward no higher than said permanent pool water surface elevation level, said upstream side of said first baffle including at least a portion angled upward from said bottom and towards said outlet;

a second baffle between said first baffle and said outlet having an upstream side and a downstream side, said second baffle connected to said bottom and

extending upward no higher than said permanent pool water surface elevation level, said upstream side of said second baffle including at least a portion angled upward from said bottom and toward said outlet;

an active pool, said active pool defined by said inlet, said outlet, and said top of said receptacle; and,

a permanent pool, said permanent pool defined by said first baffle, said second baffle, said left side wall, said right side wall, and said permanent pool water surface elevation level, said permanent pool generally gravitationally below said active pool.

36. A method for purification and separation of a liquid, the method comprising:

inputting the liquid into a receptacle through an inlet opening;

interrupting the flow of the liquid around at least one inlet baffle after the inlet opening;

communicating the liquid through an active pool to an outlet opening, the outlet opening smaller than the intake opening;

interrupting the flow of the liquid around at least one outlet baffle before the outlet opening;

settling sediments from the flow in the active pool into at least one permanent pool, said permanent pool gravitationally below the active pool; and,

37. The method of claim 36, further comprising the step of removing overflow liquid from the receptacle when approximately full via an overflow structure.

38. The method of claim 36, further comprising the step of placing the overflow structure integral to the apparatus receptacle, and diverting excess flow over a control weir and back to a stormwater collection system.

39. A stormwater treatment apparatus, comprising:

a receptacle adapted to receive water flowing from a surface drainage area, comprising:

the receptacle having an inner wall and an outer wall;

an inlet, the inlet supplying water to the receptacle;

an outlet, the outlet passing water out of the receptacle, the inlet and the outlet being in fluid communication with one another; and,

a moveable orifice, the moveable orifice comprising an orifice, said orifice within a flotation collar, said orifice coupled to the outlet by an action arm.

40. The apparatus of claim 39, wherein the moveable orifice additionally comprises a swing joint, the swing joint pivoting the orifice.

41. The apparatus of claim 39, wherein the moveable orifice is composed of hydrophobic material and non-corrosive fasteners.

42. A moveable orifice for a stormwater treatment system, the moveable orifice comprising:

an orifice for receiving water from a receptacle;

a flotation collar, the flotation collar coupled to the orifice;

an action arm including a swing joint, the action arm pivoting the orifice within the receptacle; and,

the orifice in fluid communication with an outlet of the receptacle.

43. The apparatus of claim 42, wherein the moveable orifice is composed of hydrophobic material and non-corrosive fasteners.

44. A method for purification and separation of a liquid, the method comprising:

inputting the liquid into a receptacle through an inlet opening;

interrupting the flow of the liquid around at least one inlet baffle after the inlet opening;

communicating the liquid through an active pool to an outlet opening, the outlet opening smaller than the inlet opening;

interrupting the flow of the liquid around at least one outlet baffle before the outlet opening; and

settling sediments from the flow in the active pool into at least one permanent pool, said permanent pool gravitationally below the active pool.

45. The method of claim 44, further comprising the step of removing overflow liquid from the receptacle when approximately full via an overflow structure.

46. The method of claim 44, further comprising the step of placing the overflow structure integral to the apparatus receptacle, and diverting excess flow over a control weir and back to a stormwater collection system.

47. The method of Claim 44, further comprising holding sediments settled from the active pool in an inactive pool.

48. The method of Claim 44 further comprising reducing the flow rate of liquid through the outlet opening by including an orifice substantially smaller than the inlet.

49. The method of Claim 44, further comprising controlling the discharge of liquid by moving the outlet opening.

50. The method of Claim 44, further comprising filtering the liquid through a mesh screen before discharge.

51. The method of Claim 44, further comprising trapping materials heavier than water using at least one modular mid section of the receptacle, wherein the at least one mid section is in fluid communication with the inlet opening and the outlet opening and includes at least one baffle, the trapping of materials heavier than water being accomplished via the reduction of the rate of flow with the at least one baffle.

52. The method of Claim 51, wherein during the trapping of materials heavier than water, the at least one baffle of the at least one modular mid section cooperates with at least one other baffle to separate the active pool from the at least one permanent pool.

53. The method of Claim 44, further comprising trapping materials lighter than water using at least one modular mid section of the receptacle, wherein the at least one mid section includes at least one baffle extending above the at least one permanent pool.

54. A method for purification and separation of a liquid, the method comprising:

inputting the liquid into a receptacle through an inlet opening;

reducing the flow rate of the liquid by directing said liquid around at least one inlet baffle after the inlet opening;

communicating the liquid through an active pool to an outlet opening, the outlet opening smaller than the inlet opening;

reducing the flow of the liquid by directing said liquid around at least one outlet baffle before the outlet opening; and,

settling sediments from the flow in the active pool into at least one permanent pool, said permanent pool gravitationally below the active pool.